Divya Sri Thumu

divyasrithumu@gmail.com | (708)-407-6097 | https://www.linkedin.com/in/divya-thumu/| https://divya-thumu.netlify.app/

EDUCATION

University of Illinois Urbana-Champaign **Champaign, Illinois**

B.S. in Computer Science and Bioengineering Expected Graduation: May 2027

- **Related Coursework:** *CS 374: Introduction to Algorithms & Models of Computation, CS 441: Applied Machine Learning, CS 411: Database Systems, MATH 357: Numerical Methods 1, BIOE 380: Biomedical Imaging*
- **GPA:** 3.96/4.00

EXPERIENCE

Data Engineer @ CSL Behring (Pharmaceutical Company)

March 2025 – Present Bradley, Illinois

- Engineered PySpark pipelines in **Palantir Foundry** and **Databricks** to integrate time-series manufacturing data ingested from **SAP, MES, LIMS, OSI PI, Control System** across 5 global sites, enabling **faster anomaly detection** and quality analytics
- Built a **real-time dashboard** for tracking production events with full data lineage, allowing **100+ users** to perform **root cause analysis** across interconnected batch records
- Integrated a **natural language AI agent** to automate queries and visualizations, accelerating cross-departmental data analysis
- Developed an **AI-powered recommendation engine** using **vector embeddings** and **retrieval-augmented generation (RAG)** to **suggest relevant past incidents** and resolution strategies, cutting manual investigation time
- Leveraged **Siemens Opcenter, PCS, and Kneat** to retrieve **batch records** and update **GMP-compliant documentation**

Software Engineer Technical Lead @ Disruption Lab at Gies

January 2025 – Present Champaign, Illinois

- Developed a **RAG-based backend pipeline** for **personalized Coursera AI avatars** using **Pinecone for vector embeddings**, **Claude Sonnet 3.5 via Amazon Bedrock**, and **AWS infrastructure** to enable **semantic search** and contextual responses
- Integrated the model with the frontend, **enabling real-time, course-specific student interactions** and built a clear implementation roadmap for **end-to-end system deployment**

Project Manager @ Illinois Medical Advancements Through Design and Engineering (I-MADE)

August 2024 – Present Champaign, Illinois

- Leading development of a **React Native mobile app** for **Treehouse Pediatric Therapy**, using **Figma** and managing a **detailed product roadmap** to ensure timely delivery for a tool **impacting 30+ therapists** and their appointments
- Conducted **4+ technical workshops** to **upskill a team of 6+ developers**, enabling each member to contribute and build functional app screens

Research Intern @ Argonne National Laboratory

August 2022 – May 2024 Lemont, Illinois

- **Project 1:** 16S rRNA Sequencing & Analysis of Soil Microbial Communities under Mrs. Sara Forrester
- Programmed in **RStudio** to generate detailed bar graph models **comparing microbial compositions** across 100+ soil samples
- **Project 2:** Protein Crystallography and Bioinformatics under Dr. Narayanasami Sukumar
- Analyzed **Type-I copper proteins** using data from the **Advanced Photon Source** and **3D modeling tools (CCP4MG, COOT)**
- Built **Python and Java scripts** to **automate data processing workflows**, cutting analysis time by 95%

PROJECTS

Predicting The Hardship Index of Chicago Communities May 2024 – May 2025

- Analyzed **public service and socioeconomic data** from the **Chicago Data Portal** to identify which factors (e.g., schools, hospitals, businesses) most influence the **Hardship Index across 70+ communities**
- Built **predictive models (Linear/Lasso Regression, KNN)** using Scikit-Learn, PyTorch, and GeoPandas, and began implementing a **neural network** to determine **optimal charity placement and community resource allocation**

Course Minor Recommender January 2025 – May 2025

- Designed a **minor recommendation system** for UIUC students using **React Native and Python with Django** to analyze a student's major and completed coursework
- Integrated **Adzuna API** to display jobs tailored to each **major–minor combo**, using **survey data from 100+ students**

TECHNICAL SKILLS

- **Certifications:** Machine Learning in Python through IBM, Introduction to Deep Learning & Neural Networks with Keras through IBM
- **Programming Languages:** Java, C++, Python, SQL, React Native, HTML/CSS, Javascript
- **Tools:** Android Studio, Anaconda, Eclipse, Jupyter Notebooks, Git, RStudio, Oracle